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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,581	10/11/2000	Marc J. Ruymen	BST-2	4798

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EXAMINER

NGUYEN, TU T

ART UNIT PAPER NUMBER

2877

DATE MAILED: 12/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/686,581

Applicant(s)

RUYMEN ET AL.

Examiner

Tu T Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Detailed Office Action

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6,13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimer et al (6,061,086).

With respect to claim 1, Reimer discloses a system for inspecting an object. The system comprises: a light source (column 4, line 50), a scanning zone 100 (fig 4), a first detector 20 (fig 3) having a first field of view F1 (column 6, lines 62-63), a second detector 30 (fig 3) having a second field of view F2 (column 6, lines 64-65), a control circuit 26 (fig 3) in operable communication with the first and the second signals.

Reimer does not explicitly disclose the field of view of the first detector larger than the light beam cross sectional area and the field of view of the second detector generally equal to the cross section area. Since Reimer discloses the size of the field of view of the first and second detectors, it would have been obvious a design choice to select any size of the field of view for the detectors to inspect different objects. The modification involves only routine skill in the art.

With respect to claim 2, Reimer discloses a convey 116 (fig 3) for removing the test object from the scanning window.

With respect to claim 3, with respect to claim 3, the air ejectors would have been known in the art. It would have been obvious to modify Reimer's removal mechanism with the known air ejectors to test different objects.

With respect to claim 4, Reimer does not explicitly disclose a difference device. Since Reimer a controller 26 (fig 3) for controlling the output signals of the first and the second detectors 20, 30 (fig 3), Reimer inherently discloses a different device to compare or subtract the two signals in order to make the judgement.

With respect to claims 5-6,19, Reimer does not disclose a diaphragm device to define the size of the field of view of the detector. However, using a diaphragm device to define the size of the field of view of a detector would have been known in the art. It would have been obvious to modify Reimer with a known diaphragm to adjust the size of the field of view of the detector easier.

With respect to claim 13, Reimer does not disclose a vibrating table. However, the vibrating table would have been known. It would have been obvious a design choice to modify Reimer with the known vibrating table for testing certain objects which requires a vibrating force.

With respect to claim 14, refer to discussion in claim 1 above. Further, refer to discussion in claim 3 for the air rejector.

With respect to claims 15-18,20, Reimer does not disclose the claimed limitations as claimed in claims 15-18,20. However, it would have been a design choice to modify Reimer by adding additional sorting control signals based on color of the products in order to sort the products by the color. Since the general conditions of the invention are disclosed by the prior art, adding additional sorting control signals based on color of the products in order to sort the products by the color involves only routine skill in the art.

Claims 7-9,21-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimer et al (6,061,086) in view of Lockett (4,260,062).

With respect to claim 7, Reimer does not disclose a beam splitter. However, Lockett discloses using a beam splitter in front of the first and the second sensor (column 10, lines 15-30). It would have been obvious to modify Reimer with Lockett to make the system more efficient.

With respect to claims 8-9, Lockett does not disclose a polarizing beam splitter. However, using a polarizing beam would have been known in the art. It would have been obvious to substitute Lockett's beam splitter with the known polarizing beam splitter to make the system more accurate.

With respect to claim 21, refer to discussion in claim 1 above. Further refer to discussion in claim 7 for the beam splitter.

With respect to claim 22, refer to discussion in claim 4 above.

With respect to claims 23-24, refer to discussion in claims 15-18 above.

With respect to claim 25-26, refer to discussion in claims 8-9 for the polarizing beam splitter.

With respect to claims 27, 29-30, Reimer does not disclose the moving direction of the product. However, it would have been a design choice to modify Reimer with different moving direction to test different objects with different shapes.

With respect to claim 28, refer to discussion in claim 13.

With respect to claim 31, refer to discussion in claim 3 above for the air ejector.

With respect to claim 32, the claimed sorting product by specific visible light differences would have been known. It would have been obvious to modify Reimer with the known method to make the method more accurate.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimer et al (6,061,086) in view of Tsuji et al (5,591,985).

With respect to claim 10, Reimer does not disclose a rotating multifaceted mirror for scanning the object. Tsuji discloses a multifaceted mirror for scanning the test surface 22 (fig 1). It would have been obvious to combine Reimer with Tsuji's multifaceted mirror to scan the whole test surface.

With respect to claim 11, Tsuji discloses a laser light source 21 (fig 1).

With respect to claim 12, Tsuji discloses a laser source. Tsuji does not disclose a multiple laser beams. However, it would have been obvious to modify Tsuji with a plurality sources with different wavelengths to make the system more accurate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T Nguyen whose telephone number is (703) 306-9185. The examiner can normally be reached on M-T 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Tu Tuan Nguyen

Patent Examiner TC 2877

12/29/02